CLAIMS

1	1.	(currently amended) In a receiver of a multiple-input multiple-output (MIMO) system,		
2	the receiver having a plurality of receiver antennas, a method comprising:			
3	(a)	receiving signals from a plurality of transmitter antennas, each transmitter antenna		
4	transmitting m	transmitting multiple channels;		
5	(b)	for each of a plurality of channels originating from the transmit antennas, estimating a		
6	CIR value char	racterizing channel impulse response (CIR) of the channel;		
7	(c)	summing the CIR values for the plurality of channels to generate a plurality of summed		
8	CIR values;			
9	(d)	integrating the summed CIR values over a specified window to generate an integrated		
10	summed CIR value;			
11	(e)	determining symbol timing in the received signals based on the integrated summed CIR		
12	value; and			
13	(f)	processing the received signals based on the determined symbol timing, wherein:		
14		a plurality of integrated summed CIR values are generated corresponding to a plurality of		
15	different instar	nces of the specified window, each instance corresponding to integrating a different set of		
16	summed CIR v	alues for the plurality of channels; and		
17		the determined symbol timing is based on selecting a maximum integrated summed CIR		
18	value of the pl	urality of integrated summed CIR values.		
1	2.	(previously presented) The method of claim 1, wherein the MIMO system is a MIMO		
2	orthogonal free	quency division multiplexing (OFDM) system.		
1	3.	(previously presented) The method of claim 1, wherein each CIR value corresponds to		
2	power of the C	IR.		
1	4.	(previously presented) The method of claim 3, wherein each CIR value is based on a		
2	correlation bet	ween a corresponding received signal and a known training sequence.		
1	5.	(previously presented) The method of claim 1, wherein the specified window has a		
2	duration substa	antially equal to the length of a guard interval of symbols in the received signals.		
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duration substantially equal to a maximum tolerable delay spread for the received signals.

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(previously presented) The method of claim 1, wherein the specified window has a

1	<i>i</i> .	(canceled)		
1	8.	(previously presented) The method of claim 1, wherein the processing of the received		
2	signals include	es generating a discrete Fourier transform (DFT) for each received signal, wherein timing		
3	of the DFT is l	pased on the determined symbol timing.		
1	9.	(previously presented) The method of claim 1, wherein the plurality of channels		
2	corresponds to a single antenna of the receiver.			
l.	10.	(previously presented) The method of claim 1, wherein a different symbol timing is		
2	determined for each different receiver antenna.			
1	11.	(previously presented) The method of claim 10, wherein:		
2	timing	of the processing of the received signals for each different receiver antenna is based on		
3	the maximum	the maximum symbol timing for all of the receiver antennas; and		
4	at leas	t one received signal is delayed based on a timing difference between the maximum		
5	symbol timing	and the symbol timing determined for said at least one received signal.		
1	12.	(previously presented) The method of claim 1, wherein the plurality of channels		
2	corresponds to all of the antennas of the receiver.			
1	13.	(previously presented) The method of claim 12, wherein a single, joint symbol timing is		
2	determined for all of the receiver antennas by:			
3	(b)	estimating the CIR value for each of the plurality of channels corresponding to all of the		
4	antennas of the	e receiver;		
5	(c)	summing the CIR values for the plurality of channels corresponding to all of the antennas		
6	of the receiver to generate the plurality of summed CIR values;			
7	(d)	integrating the summed CIR values over a specified window to generate the integrated		
8	summed CIR value; and			
9	(e)	determining the single, joint symbol timing in the received signals based on the		

integrated summed CIR value.

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1	14. (previously presented) The method of claim 1, wherein the determined symbol timing		
2	corresponds to minimal CIR power falling outside of the specified window and maximal CIR power		
3	falling inside the specified window.		
1	15. (currently amended) A receiver for a multiple-input multiple-output (MIMO) system, the		
2	receiver comprising:		
3	a plurality of receiver antennas, each adapted to receive signals from a plurality of transmitter		
4	antennas in the MIMO system, each transmitter antenna transmitting multiple channels;		
5	a receiver branch for each different receiver antenna, each receiver branch having a transform		
6	adapted to transform a corresponding received signal into a plurality of transformed components;		
7	a symbol decoder adapted to receive transformed components from each transform and to detect		
8	symbols, wherein:		
9	processing within each receiver branch is based on symbol timing determined for each		
10	receiver branch; [[and]]		
11	at least one receiver branch is adapted to determine its symbol timing by		
12	(a) for each of a plurality of channels originating from the transmit antennas,		
13	estimating a CIR value characterizing channel impulse response (CIR) of the channel;		
14	(b) summing the CIR values for the plurality of channels to generate a		
15	plurality of summed CIR values;		
16	(c) integrating the summed CIR values over a specified window to generate		
17	an integrated summed CIR value; and		
18	(d) determining the symbol timing in the received signals based on the		
19	integrated summed CIR value;		
20	a plurality of integrated summed CIR values are generated corresponding to a plurality of		
21	different instances of the specified window, each instance corresponding to integrating a different set of		
22	summed CIR values for the plurality of channels; and		
23	the determined symbol timing is based on selecting a maximum integrated summed CIR		
24	value of the plurality of integrated summed CIR values.		
1	16. (previously presented) The receiver of claim 15, wherein each CIR value corresponds to		

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power of the CIR, wherein each CIR value is based on a correlation between a corresponding received

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signal and a known training sequence.

1	17.	(previously presented) The receiver of claim 15, wherein the specified window has a		
2	duration substantially equal to the length of a guard interval of symbols in the received signals.			
1	18.	(previously presented) The receiver of claim 15, wherein the specified window has a		
2	duration substa	antially equal to a maximum tolerable delay spread for the received signals.		
1	19.	(canceled)		
1	20.	(previously presented) The receiver of claim 15, wherein each transform is a discrete		
2	Fourier transform (DFT), wherein timing of the DFT is based on the determined symbol timing.			
1	21.	(previously presented) The receiver of claim 15, wherein the plurality of channels used		
2	by the at least one receiver branch corresponds to a single antenna of the receiver.			
1	22.	(previously presented) The receiver of claim 21, wherein a different symbol timing is		
2		determined for each different receiver antenna.		
1	23.	(previously presented) The receiver of claim 22, wherein:		
2		of the processing of the received signals for each different receiver antenna is based on		
3		symbol timing for all of the receiver antennas; and		
4		at least one received signal is delayed based on a timing difference between the maximum		
5		and the symbol timing determined for said at least one received signal.		
1	24.	(previously presented) The receiver of claim 15, wherein a single, joint symbol timing is		
2		all of the antennas of the receiver by the at least one receiver branch by:		
3		estimating the CIR value for each of the plurality of channels corresponding to all of the antenna.		
4	of the receiver			
5		summing the CIR values for the plurality of channels corresponding to all of the antennas of the		
6		receiver to generate the plurality of summed CIR values;		
7	_	integrating the summed CIR values over a specified window to generate the integrated summed		
8	CIR value; and			
9	•	ining the single, joint symbol timing in the received signals based on the integrated		
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summed CIR value.

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1	25.	(previously presented) The receiver of claim 15, wherein the determined symbol timing	
2	corresponds to minimal CIR power falling outside of the specified window and maximal CIR power		
3	falling inside the specified window.		
1	26.	(canceled)	
1	27.	(previously presented) In a receiver of a multiple-input multiple-output (MIMO) system,	
2	the receiver having a plurality of receiver antennas, a method comprising:		
3	(a)	receiving signals from a plurality of transmitter antennas;	
4	(b)	for each of a plurality of channels originating from the transmit antennas, estimating a	
5	CIR value characterizing channel impulse response (CIR) of the channel;		
6	(c)	summing the CIR values for the plurality of channels;	
7	(d)	integrating the summed CIR values over a specified window;	
8	(e)	determining symbol timing in the received signals based on the integrated summed CIR	
9	value; and		
10	(f)	processing the received signals based on the determined symbol timing, wherein:	
11		the plurality of channels corresponds to a single antenna of the receiver;	
12		a different symbol timing is determined for each different receiver antenna;	
13		timing of the processing of the received signals for each different receiver antenna is	
14	based on the maximum symbol timing for all of the receiver antennas; and		
15		at least one received signal is delayed based on a timing difference between the	
16	maximum symbol timing and the symbol timing determined for said at least one received signal.		
7	28.	(previously presented) In a receiver of a multiple-input multiple-output (MIMO) system,	
1 2		aving a plurality of receiver antennas, a method comprising:	
3		receiving signals from a plurality of transmitter antennas;	
	(a)	for each of a plurality of channels originating from the transmit antennas, estimating a	
4	(b)	. ,	
5		aracterizing channel impulse response (CIR) of the channel;	
6	(c)	summing the CIR values for the plurality of channels;	
7	(d)	integrating the summed CIR values over a specified window;	
8	(e)	determining symbol timing in the received signals based on the integrated summed CIR	
9	value, wherein the determined symbol timing corresponds to minimal CIR power falling outside of the		
10	•	dow and maximal CIR power falling inside the specified window; and	
11	(f)	processing the received signals based on the determined symbol timing.	